STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION

JOHN ELIAS BALDACCI
GOVERNOR

DAVID P. LITTELL
COMMISSIONER

**Maine Coast Regional Health Facilities**
**d/b/a Maine Coast Memorial Hospital**
**Hancock County**
**Ellsworth, Maine**
**A-233-71-I-R/M**

**Departmental**
**Findings of Fact and Order**
**Air Emission License**

After review of the air emissions license application, staff investigation reports and other documents in the applicant's file in the Bureau of Air Quality, pursuant to 38 M.R.S.A., §344 and §590, the Department finds the following facts:

## I. REGISTRATION

### A. Introduction

1. Maine Coast Regional Health Facilities d/b/a Maine Coast Memorial Hospital (MCMH) has applied to renew their Air Emission License permitting the operation of emission sources associated with their healthcare facility.

2. The equipment addressed in this license is located at 50 Union Street, Ellsworth, Maine.

3. MCMH has requested a minor revision to their license in order to:

   a. redefine the term "emergency" as it pertains to the operation of the facility's emergency diesel generator; and
   b. add two small boilers.

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B. Emission Equipment

The following equipment is addressed in this air emission license:

**Boilers**

| Equipment | Maximum Capacity (MMBtu/hr) | Maximum Firing Rate (gal/hr) | Fuel Type, % sulfur | Stack # |
|---|---|---|---|---|
| Boiler #1 | 8.37 | 59.8 | #2 fuel oil, 0.5% | 5 |
| Boiler #7 | 8.37 | 59.8 | #2 fuel oil, 0.5% | 5 |
| Boiler #8 | 1.04 | 7.4 | #2 fuel oil, 0.5% | 6 |
| Boiler #9 | 1.04 | 7.4 | #2 fuel oil, 0.5% | 6 |
| Boiler #10* | 1.36 | 9.7 | #2 fuel oil, 0.5% | 7 |
| Boiler #11* | 1.36 | 9.7 | #2 fuel oil, 0.5% | 7 |

*Boilers #10 & #11 are existing boilers that were inadvertently omitted from previous licensing.

**Electrical Generation Equipment**

| Equipment | Maximum Capacity (MMBtu/hr) | Maximum Firing Rate (gal/hr) | Fuel Type, % sulfur | Stack # |
|---|---|---|---|---|
| Generator #10 | 5.5 | 40.0 | diesel fuel, 0.05% | 2 |

C. Application Classification

The amendment associated with this renewal will not increase emissions of any pollutant. Therefore, this license is determined to be a renewal with a minor revision and has been processed through *Major and Minor Source Air Emission License Regulations*, 06-096 CMR 115 (last amended December 24, 2005).

## II. BEST PRACTICAL TREATMENT (BPT)

A. Introduction

In order to receive a license the applicant must control emissions from each unit to a level considered by the Department to represent Best Practical Treatment (BPT), as defined in *Definitions Regulation*, 06-096 CMR 100 (last amended December 24, 2005). Separate control requirement categories exist for new and

existing equipment as well as for those sources located in designated non-attainment areas.

BPT for existing emissions equipment means that method which controls or reduces emissions to the lowest possible level considering:

- the existing state of technology;
- the effectiveness of available alternatives for reducing emissions from the source being considered; and
- the economic feasibility for the type of establishment involved.

BPT for new sources and modifications requires a demonstration that emissions are receiving Best Available Control Technology (BACT), as defined in *Definitions Regulation*, 06-096 CMR 100 (last amended December 24, 2005). BACT is a top-down approach to selecting air emission controls considering economic, environmental and energy impacts.

B. Boilers #1, 7, 8, 9, 10 & 11

Boiler #1, 7, 8, 9, 10, and 11 are used primarily for facility heating and sterilization purposes.

These boilers each have a maximum heat input of less than 10 MMBtu/hr and are therefore not subject to the New Source Performance Standards (NSPS) 40 CFR Part 60, Subpart Dc, *Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units*, for units greater than 10 MMBtu/hr manufactured after June 9, 1989.

A summary of the BPT analysis for Boilers #1, 7, 8, 9, 10, and 11 is the following:

1. The total fuel use for the boilers shall not exceed 500,000 gal/year of #2 fuel oil based on a 12 month rolling total.
2. The $SO_2$ emission limits are based on the firing of fuel which meets the criteria in ASTM D396 for #2 fuel oil.
3. *Fuel Burning Equipment Particulate Emission Standard*, 06-096 CMR 103 (last amended November 3, 1990) regulates PM emission limits for Boilers #1 and #7. However, a BPT analysis determined a more stringent limit of 0.08 lb/MMBtu was appropriate and shall be used. The $PM_{10}$ limits are derived from the PM limits.
4. $NO_x$ emission limits are based on data from similar #2 oil fired boilers of this size and age.
5. CO and VOC emission limits are based upon AP-42 data dated 9/98.

6. Visible emissions from the boilers shall each not exceed 20% opacity on a six (6) minute block average, except for no more than one (1) six (6) minute block average in a continuous 3-hour period.

C. Generator #10

MCMH operates one back-up diesel generator.

MCMH's current air emission license specifically prohibits them from running their emergency generators, for purposes other than for regular maintenance, until off-site power becomes unavailable. That is the point at which the term "emergency" has traditionally been applied.

Due to the potential for tight electricity supplies, ISO New England has taken several precautionary steps to ensure the reliability of the region-wide bulk power system. One of those steps is the implementation of the Demand Response Program. This program offers financial incentives to customers, such as MCMH, to reduce electricity demand during peak periods. This program can significantly improve the reliability of the region-wide bulk power system and allow ISO New England to avoid drastic measures, such as brown outs.

In order for MCMH to participate in the Demand Response Program, they need to start their generators and run them prior to, or in lieu of, loss of off-site power. MCMH will only operate in this manner if there is a documented request from ISO New England under their emergency OP-4 procedures. ISO New England's OP-4 is a procedure which establishes criteria and guidelines for actions during capacity deficiencies. OP-4 is implemented when there is determined to be a serious threat to the integrity of the bulk power system. Therefore, the Department has agreed to redefine the term "emergency" as it applies to MCMH's generators to include ISO New England OP-4 emergencies.

Therefore "Emergency Generator", as it applies to MCMH, is defined as any stationary internal combustion engine whose operation is limited to emergency situations, required testing and maintenance, and ISO New England OP-4 emergencies. Examples include stationary engines used to produce power for critical networks or equipment (including power supplied to portions of a facility) when electric power from the local utility (or the normal power source, if the facility runs on its own power production) is interrupted, or stationary engines used to pump water in the case of fire or flood.

Additionally, MCMH shall only be permitted to operate their generators in response to an OP-4 emergency for a total of no more than 50 hours each calendar year.

A summary of the BPT analysis for Generator #10 is the following:

1. Generator #10 shall fire only diesel fuel with a maximum sulfur content not to exceed 0.05% by weight.
2. Generator #10 shall be limited to 500 hr/yr of operation, including no more than 50 hours per calendar year in response to an OP-4 emergency, based on a 12 month rolling total. Compliance shall be demonstrated by a written log of all generator operating hours.
3. 06-096 CMR 106 regulates fuel sulfur content, however in this case a BPT analysis for $SO_2$ determined a more stringent limit of 0.05% was appropriate and shall be used.
4. 06-096 CMR 103 regulates PM emission limits. The $PM_{10}$ limits are derived from the PM limits.
5. $NO_x$, CO, and VOC emission limits are based upon AP-42 data dated 10/96.
6. Visible emissions from Generator #10 shall not exceed 20% opacity on a six (6) minute block average, except for no more than two (2) six (6) minute block averages in a continuous 3-hour period.

D. Annual Emissions

MCMH shall be restricted to the following annual emissions, based on a 12 month rolling total:

**Total Licensed Annual Emissions for the Facility**
**Tons/year**
(used to calculate the annual license fee)

| | **PM** | **$PM_{10}$** | **$SO_2$** | **$NO_x$** | **CO** | **VOC** |
|---|---|---|---|---|---|---|
| Boilers | 2.8 | 2.8 | 17.6 | 10.5 | 1.3 | 0.1 |
| Generator #10 | 0.2 | 0.2 | 0.1 | 4.4 | 1.2 | 0.1 |
| **Total TPY** | **3.0** | **3.0** | **17.7** | **14.9** | **2.5** | **0.2** |

## III. AMBIENT AIR QUALITY ANALYSIS

According to 06-096 CMR 115, the level of air quality analyses required for a renewal source shall be determined on a case-by case basis. Modeling and monitoring are not required for a renewal if the total emissions of any pollutant released do not exceed the following:

| Pollutant | Tons/Year |
|---|---|
| PM | 25 |
| $PM_{10}$ | 25 |
| $SO_2$ | 50 |
| $NO_x$ | 100 |
| CO | 250 |

Based on the total facility licensed emissions, MCMH is below the emissions level required for modeling and monitoring.

## ORDER

Based on the above Findings and subject to conditions listed below, the Department concludes that the emissions from this source:

- will receive Best Practical Treatment,
- will not violate applicable emission standards,
- will not violate applicable ambient air quality standards in conjunction with emissions from other sources.

The Department hereby grants Air Emission License A-233-71-I-R/M subject to the following conditions.

Severability. The invalidity or unenforceability of any provision, or part thereof, of this License shall not affect the remainder of the provision or any other provisions. This License shall be construed and enforced in all respects as if such invalid or unenforceable provision or part thereof had been omitted.

## STANDARD CONDITIONS

(1) Employees and authorized representatives of the Department shall be allowed access to the licensee's premises during business hours, or any time during which any emissions units are in operation, and at such other times as the Department deems necessary for the purpose of performing tests, collecting samples, conducting inspections, or examining and copying records relating to emissions (38 M.R.S.A. §347-C).

(2) The licensee shall acquire a new or amended air emission license prior to commencing construction of a modification, unless specifically provided for in Chapter 115. [06-096 CMR 115]

(3) Approval to construct shall become invalid if the source has not commenced construction within eighteen (18) months after receipt of such approval or if construction is discontinued for a period of eighteen (18) months or more. The Department may extend this time period upon a satisfactory showing that an extension is justified, but may condition such extension upon a review of either the control technology analysis or the ambient air quality standards analysis, or both. [06-096 CMR 115]

(4) The licensee shall establish and maintain a continuing program of best management practices for suppression of fugitive particulate matter during any period of construction, reconstruction, or operation which may result in fugitive dust, and shall submit a description of the program to the Department upon request. [06-096 CMR 115]

(5) The licensee shall pay the annual air emission license fee to the Department, calculated pursuant to Title 38 M.R.S.A. §353. [06-096 CMR 115]

(6) The license does not convey any property rights of any sort, or any exclusive privilege. [06-096 CMR 115]

(7) The licensee shall maintain and operate all emission units and air pollution systems required by the air emission license in a manner consistent with good air pollution control practice for minimizing emissions. [06-096 CMR 115]

(8) The licensee shall maintain sufficient records to accurately document compliance with emission standards and license conditions and shall maintain such records for a minimum of six (6) years. The records shall be submitted to the Department upon written request. [06-096 CMR 115]

(9) The licensee shall comply with all terms and conditions of the air emission license. The filing of an appeal by the licensee, the notification of planned changes or anticipated noncompliance by the licensee, or the filing of an application by the licensee for a renewal of a license or amendment shall not stay any condition of the license. [06-096 CMR 115]

(10) The licensee may not use as a defense in an enforcement action that the disruption, cessation, or reduction of licensed operations would have been necessary in order to maintain compliance with the conditions of the air emission license. [06-096 CMR 115]

(11) In accordance with the Department's air emission compliance test protocol and 40 CFR Part 60 or other method approved or required by the Department, the licensee shall:

A. perform stack testing to demonstrate compliance with the applicable emission standards under circumstances representative of the facility's normal process and operating conditions:
   1. within sixty (60) calendar days of receipt of a notification to test from the Department or EPA, if visible emissions, equipment operating parameters, staff inspection, air monitoring or other cause indicate to the Department that equipment may be operating out of compliance with emission standards or license conditions; or
   2. pursuant to any other requirement of this license to perform stack testing.

B. install or make provisions to install test ports that meet the criteria of 40 CFR Part 60, Appendix A, and test platforms, if necessary, and other accommodations necessary to allow emission testing; and

C. submit a written report to the Department within thirty (30) days from date of test completion.

[06-096 CMR 115]

(12) If the results of a stack test performed under circumstances representative of the facility's normal process and operating conditions indicate emissions in excess of the applicable standards, then:

A. within thirty (30) days following receipt of such test results, the licensee shall re-test the non-complying emission source under circumstances representative of the facility's normal process and operating conditions and in accordance with the Department's air emission compliance test protocol and 40 CFR Part 60 or other method approved or required by the Department; and

B. the days of violation shall be presumed to include the date of stack test and each and every day of operation thereafter until compliance is demonstrated under normal and representative process and operating conditions, except to the extent that the facility can prove to the satisfaction of the Department that

there were intervening days during which no violation occurred or that the violation was not continuing in nature; and

C. the licensee may, upon the approval of the Department following the successful demonstration of compliance at alternative load conditions, operate under such alternative load conditions on an interim basis prior to a demonstration of compliance under normal and representative process and operating conditions.

[06-096 CMR 115]

(13) Notwithstanding any other provisions in the State Implementation Plan approved by the EPA or Section 114(a) of the CAA, any credible evidence may be used for the purpose of establishing whether a person has violated or is in violation of any statute, regulation, or Part 70 license requirement. [06-096 CMR 115]

(14) The licensee shall maintain records of malfunctions, failures, downtime, and any other similar change in operation of air pollution control systems or the emissions unit itself that would affect emission and that is not consistent with the terms and conditions of the air emission license. The licensee shall notify the Department within two (2) days or the next state working day, whichever is later, of such occasions where such changes result in an increase of emissions. The licensee shall report all excess emissions in the units of the applicable emission limitation. [06-096 CMR 115]

(15) Upon written request from the Department, the licensee shall establish and maintain such records, make such reports, install, use and maintain such monitoring equipment, sample such emissions (in accordance with such methods, at such locations, at such intervals, and in such a manner as the Department shall prescribe), and provide other information as the Department may reasonably require to determine the licensee's compliance status. [06-096 CMR 115]

## SPECIFIC CONDITIONS

(16) **Boilers #1, 7, 8, 9, 10, and 11**

A. Total fuel use for the boilers shall not exceed 500,000 gal/yr of #2 fuel oil. Compliance shall be demonstrated by fuel records from the supplier showing the quantity and type of fuel delivered (ASTM D396 compliant). Records of annual fuel use shall be kept on a 12-month rolling total basis. [06-096 CMR 115, BPT]

B. Emissions shall not exceed the following:

| Emission Unit | Pollutant | lb/MMBtu | Origin and Authority |
|---|---|---|---|
| Boiler #1 | PM | 0.08 | 06-096 CMR 115, BPT |
| Boiler #7 | PM | 0.08 | 06-096 CMR 115, BPT |

C. Emissions shall not exceed the following [06-096 CMR 115, BPT]:

| Emission Unit | PM (lb/hr) | $PM_{10}$ (lb/hr) | $SO_2$ (lb/hr) | $NO_x$ (lb/hr) | CO (lb/hr) | VOC (lb/hr) |
|---|---|---|---|---|---|---|
| Boiler #1 | 0.67 | 0.67 | 4.21 | 2.51 | 0.30 | 0.02 |
| Boiler #7 | 0.67 | 0.67 | 4.21 | 2.51 | 0.30 | 0.02 |
| Boiler #8 | 0.08 | 0.08 | 0.52 | 0.31 | 0.04 | 0.01 |
| Boiler #9 | 0.08 | 0.08 | 0.52 | 0.31 | 0.04 | 0.01 |
| Boiler #10 | 0.11 | 0.11 | 0.68 | 0.41 | 0.05 | 0.01 |
| Boiler #11 | 0.11 | 0.11 | 0.68 | 0.41 | 0.05 | 0.01 |

D. Visible emissions from Stack #5 (Boilers #1 & #7), Stack #6 (Boilers #8 & #9), and Stack #7 (Boilers #10 and #11) shall each not exceed 20% opacity on a six (6) minute block average, except for no more than two (2) six (6) minute block averages in a continuous 3-hour period. [06-096 CMR 101]

(17) **Generator #10**

A. MCMH shall only operate Generator #10 for periods of maintenance and readiness testing, emergencies when off-site power is unavailable, and ISO New England OP-4 emergencies. [06-096 CMR 115, BPT]

B. MCMH shall keep records for OP-4 emergencies which include the date, start time and stop time for the generator, and documentation that during these dates and times, ISO New England implemented operating procedures described in ISO New England Operating Procedure No. 4, Action 12. [06-096 CMR 115, BPT]

C. MCMH shall not operate Generator #10 for more than 50 hours each per calendar year in response to an OP-4 emergency. [06-096 CMR 115, BPT]

D. MCMH shall limit Generator #10 to 500 hr/yr of operation (based on a 12 month rolling total). [06-096 CMR 115, BPT]

E. An hour meter shall be maintained and operated on Generator #10. [06-096 CMR 115, BPT]

F. Generator #10 shall fire #2 fuel oil with a sulfur limit not to exceed 0.05% by weight. Compliance shall be based on fuel records from the supplier showing the quantity of fuel delivered and the percent sulfur of the fuel. [06-096 CMR 115, BPT]

G. Emissions shall not exceed the following:

| Emission Unit | Pollutant | lb/MMBtu | Origin and Authority |
|---|---|---|---|
| Generator #10 | PM | 0.12 | 06-096 CMR 103(2)(B)(1)(a) |

H. Emissions shall not exceed the following [06-096 CMR 115, BPT]:

| Emission Unit | PM (lb/hr) | $PM_{10}$ (lb/hr) | $SO_2$ (lb/hr) | $NO_x$ (lb/hr) | CO (lb/hr) | VOC (lb/hr) |
|---|---|---|---|---|---|---|
| Generator #10 | 0.66 | 0.66 | 0.28 | 17.54 | 4.66 | 0.49 |

I. Visible emissions from Generator #10 shall not exceed 20% opacity on a six (6) minute block average, except for no more than two (2) six (6) minute block averages in a continuous 3-hour period. [06-096 CMR 101]

(18) MCMH shall notify the Department within 48 hours and submit a report to the Department on a quarterly basis if a malfunction or breakdown in any component causes a violation of any emission standard (38 M.R.S.A. §605).

DONE AND DATED IN AUGUSTA, MAINE THIS 8th DAY OF April , 2009.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: James P. Brooks
DAVID P. LITTELL, COMMISSIONER

**The term of this license shall be five (5) years from the signature date above.**

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: 12/19/08
Date of application acceptance: 12/30/08

Date filed with the Board of Environmental Protection: _____

This Order prepared by Lynn Ross, Bureau of Air Quality.